



REPORT

Street Whale

JOIN THE WAVE TO SAVE THE WHALES

2022

2nd edition

KRIBI 08 - 11 JUNE 2022



www.ammco.org
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Artistic and scientific workshop to celebrate
the marine fauna in Cameroon

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ABBREVIATIONS LIST

- AMMCO** : African Marine Mammal Conservation Organization
- BIR** : Rapid Intervention Battalion
- CITES** : Convention sur le commerce international des espèces de faune et de flore sauvages
- COTCO** : Cameroon Oil Transportation Company
- CSO** : Civil Society Organization
- CWCS** : Cameroon Wildlife Conservation Society
- FAO** : Organisation des Nations unies pour l'alimentation
- FISH4ACP** : Project for the sustainable development of fisheries and aquaculture value chain in Africa, Caribbean and the Pacific
- IUU** : Illegal Unreported and Unregulated fishing
- LWC** : Limbe Wildlife Center
- MINEPIA** : Ministry of Livestock, Fisheries and Animal Industries
- MINFOF** : Ministry of Forestry and Fauna
- MINRESI** : Ministry of Scientific Research and Innovation
- MINESUP** : Ministry of Higher Education
- MPA**: Marine Protected Areas
- PAK** : Autonomous Port of Kribi
- SME** : Small and Medium size Enterprise
- PSMNR** : Programme for the Sustainable Management of Natural Resources
- SND**: National Development Strategy
- TRAFFIC** : Wildlife Trade Monitoring Network
- IUCN** : International Union for Conservation of Nature
- WWF**: World Wild Fund for Nature
- EEZ**: Exclusive Economic Zone

ABOUT AMMCO



AMMCO is a Cameroonian non-profit organization created in 2012 and legalized in 2014. Its vision is to make Africa's coastal and aquatic environment a threat-free home for the African manatee and other marine animals, while taking into account the best interests of the local population. Our mission is to contribute to the protection of aquatic megafauna and their habitats in Central Africa by improving scientific knowledge and involving fishermen and other stakeholders in sustainable fisheries and responsible watershed use.

To achieve our mission, we have implemented four strategies, including applied research and monitoring, integrated management, raising awareness and capacity building along the coastal zones of Cameroon. Our target species are all aquatic megafauna living on our coasts, however we focus our efforts on whales and dolphins, the African manatee, marine turtles, sharks and rays as they are more locally threatened than other aquatic megafauna species.

In order to better understand Cameroon's megafauna, AMMCO established a citizen science network of fishermen volunteer in 2015. They use the SIREN mobile application developed by AMMCO to allow them to document sightings of the aquatic megafauna species which they encounter in a timely manner along the Cameroonian coast. The data collected are automatically recorded in AMMCO's online server and can be viewed at <http://siren.ammco.org/web/en/>. This application has helped to highlight the marine species present on the Cameroonian coast and to support advocacy for the protection of five cetacean species including the sperm whale and the Atlantic humpback whale. AMMCO does not intend to stop there because a large majority of Cameroonian citizens are not aware of the presence of these species in Cameroon. AMMCO therefore intends to further raise the awareness of the public, political and private sector on the threats to these species and encourage them to commit to the cause.

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"Together to save our aquatic wildlife"



Dr Aristide TAKOUKAM KAMLA
AMMCO's Founder and Chairman

The 2022 Street Whale edition resulted to the following:

- The celebration of the World Oceans Day under the theme **"Revitalization: Collective Action for the Ocean"**;
- More than 115 participants in the symposium and other scientific activities;
- More than 1000 participants took part in sports and artistic activities;
- 6 ministerial departments (**MINFOF, MINEPDED, MINEPIA, MINRESI, MINESUP and MINTRANSPORT**) involved in the organization of the event;
- 5 partners supported the event;
- 42 presentations on coastal management with topics on erosion, spatial coastal planning and nature-based solutions, and on the other hand on the conservation of marine and coastal resources with topics on biodiversity, the fight against IUU fishing, governance of protected areas and participatory and community-based approaches to the protection of wildlife and marine habitat;
- State of play of the Cameroonian marine and coastal environment;
- Conservation and management challenges identified;
- 11 recommendations formulated for the improvement of management;
- Tales, dances, music, painting, dugout race, tug of war, beach volleyball, etc. were organized to enhance the local culture largely inspired by the marine megafauna;
- A built up whale from marine waste which was exhibited at Ngoye beach (Kribi-Cameroon);
- Mural paintings at the landing stage of Mboa-Manga;
- The creation of the Cameroon Marine and coastal network (CAMNET)

INTRODUCTION

The Street Whale is a concept that combines art and science for the outreach of knowledge on whales and other marine animals and their habitat. The event aims at raising awareness of the dangers on the marine ecosystem in Cameroon, and especially to explore solutions for the management of the environment and its resources. The African Marine Mammal Conservation Organization (AMMCO) organized the second edition of the Street Whale in Kribi from June 8 to 11, 2022 on the occasion of the World Oceans day. The event received support from the French Embassy in Cameroon, Total Energies, the municipality of Kribi and other partners.



Participants using the Street-Whale 2022 photo frame.

The concept stems from the observation that Cameroon's coastline is rich in biodiversity and has a unique aquatic megafauna including the African manatee, marine turtles, sharks, rays, dolphins and above all whales and numerous species of seafood. These animals ensure an ecological balance through their interaction with the food chain, which extends to humans. Many species such as sea turtles, whales and dolphins are major sources of income for coastal communities that depend mainly on ecotourism. Some species of sea turtles and rays are considered by the communities as a cultural heritage "totem". On the Cameroonian coast, nearly 300 communities and over 4000 families depend directly on artisanal and semi-industrial fishing for nutrition, education, health and other livelihoods.



Industrial fishing is also highly developed with over 30 companies trawling. However, the megafauna and other little-known marine biological resources are highly threatened, such as the critically endangered humpback dolphin and hawksbill turtle, 16 species of threatened elasmobranchs on the IUCN Red list. These animals face poaching by local communities, bycatch and Illegal, Unreported and Unregulated (IUU) fishing. Pollution from domestic waste, plastics and oil affect the resource with a direct impact on the economy and human health. These threats are compounded by inappropriate development and poor planning of marine and coastal space use.

Conservation actions have been undertaken by AMMCO and other partners, including biological and mechanical control of the invasive species *Salvinia molesta* in Lake Ossa, awareness campaigns and environmental education. Advocacy with government actors has been initiated on the establishment of Marine Protected Areas (MPAs) for the sustainable management of marine resources in Cameroon.



Camille Hosteint et Mathieu Sette, of the French Embassy in Cameroon, participate in the opening ceremony.

Currently, Cameroon has the Douala-Edea National Park, a terrestrial park with a maritime extension, the Manyange na Elombo-Campo National Marine Park (recently approved by decree n°2021/4804/PM of 09 July 2021, but whose management plan has not yet been elaborated) and Ndongere, which is still in proposal status.

In order to ensure the effectiveness and sustainability of a management plan for our oceans and resources, it was important for stakeholders to come together to discuss strategies for action. This report gives an account of the progress of these consultations organised in the framework of the Street Whale fair.

1. THE THEORETICAL FRAMEWORK OF THE STREET WHALE FAIR

GOALS

The street whale aims to :

- Raise awareness and sensitize the Cameroonian and international population on the dangers that weigh on the marine resources in Cameroon and the need to protect threatened species and sustainably manage the fisheries resource,
- Bring together national and sub-regional actors and create synergy between them
- Take stock of knowledge on marine and coastal ecosystems in Cameroon,
- Analyse the challenges of marine and coastal conservation,
- Formulate recommendations for the improvement of marine and coastal management in Cameroon.

PLANNED ACTIVITIES

The activities planned for the Street Whale workshop were as follows :

Artistic activities :

- Construction of a whale from marine waste,
- Mural paintings,
- Music, storytelling, dance, concert,
- Exhibitions,
- Gala

Sports activities :

- Dugout race,
- Tug of war,
- Beach volleyball,
- Beach cleaning
- Sea trip

Scientific activities :

- Marine and coastal symposium of Cameroon
- Thematic presentations and debates on: Illegal, Unreported and Unregulated (IUU) fishing, Marine Protected Areas, Marine and Coastal Planning
- Capacity building: Identification and conservation of elasmobranchs, nature-based solutions
- Workshop to set up a synergy network and to seek funding for coastal marine management in Cameroon.



Pr. Zebaze Serge, University of Yaoundé 1, moderator of the scientific workshops.

2. THE ACHIEVEMENTS OF THE STREET WHALE FAIR

The official launch of the second edition of the StreetWhale took place on June 8, 2022, the World Oceans Day celebrated under the theme: **"Revitalisation, Collective Action for the Ocean"**. The Ngoye beach hosted this ceremony which was articulated around the interventions of the officials, the visit of the artistic stands with a diversity of art objects related to the marine fauna and the Cameroonian culture and the launching of the whale constructed from marine waste. The representative of the Mayor of Kribi, in her welcoming remarks, expressed the satisfaction that the city of Kribi felt for the honour of hosting the workshop.



The representative of the Mayor of Kribi.

She also insisted on the city's willingness to support the management of marine and coastal resources in Cameroon. The President of AMMCO, Dr Aristide Takoukam Kamla in his speech emphasised the need to pool efforts through synergy actions for the conservation of marine resources and coastal development. The representative of the Ministry of Scientific Research and Innovation, Dr Tsopmbeng Numbo Gaston, stressed the importance of scientific research in the management process and the willingness of MINRESI to support the process.



Dr Aristide TAKOUKAM KAMLA during his inaugural speech.



2.1. SCIENTIFIC ACTIVITIES.

A. MARINE AND COASTAL SYMPOSIUM

The symposium started with a presentation of the overall state of knowledge of the challenges and constraints on the management and development of marine resources and coastal habitats in Africa. In this presentation, Thomas Stieglitz highlighted marine and coastal issues common to sub-tropical Atlantic Africa such as erosion, saline intrusion, flooding, lack of data on habitat, biodiversity and marine and coastal governance amplified by the lack of local expertise in Africa.



Presentation of the global ocean issue in Africa by **Dr Thomas Stieglitz**, IRD Research Director.

The first Cameroon Marine and Coastal Symposium had 42 presentations including 13 key presenters, 29 presentations selected following the call for abstracts including 19 oral presentations and 10 posters.

Marine and coastal planning / management.

Themes and sub-themes;

In this section, the presentations and debates were focused on five sub-themes:

- Marine and coastal habitat: Student Dingong Ginette demonstrated that the mangrove soil at the mouth of the Nyong is sandy and that the distribution of four species of mangrove plants depends on variations in the structure of this nitrate-poor soil. Ntangyong Indrig Laeticia, a student oceanographer, explored the feasibility of fish farming at the mouth of the Nyong and concluded that external nitrogen inputs are necessary given the characteristics of the environment.



Presentation by IT specialist **Balam Cyril** on the SIREN application.

Staying in the Nyong estuary, TCHOGOM MANGA Josué Junior, ISH student, presented his work on geomorphological characterisation.



- Coastal erosion: developed in the presentations of Dr. Onguene Raphaël (teacher researcher, University of Douala) as well as the presentation of MFOUMEYENG Gaëlle, student oceanographer, who focused on the risk in Manoka.
- Hydrology and coastal hydrobiology: A presentation was made by Nguépi Vanessa (student, University of Douala) on flood prevention in Douala while NANFACK Rodrigue (student, University of Yaoundé 1) presented on the structure and zooplanktonic biodiversity of the waters of the mangrove of the Cameroonian coast at Mouanko.

Presentations were also made on the following :

- The physicochemical quality of mangrove waters in the Cameroon estuary and its impact on the diversity and dynamics of Desmidiaceae (Zygnematophyceae), presented by KOUÉDEUM Éric Joselly (student University of Yaounde 1).
- The spatial and seasonal dynamics of oligochaete annelids as a function of some abiotic parameters in the Nyong estuary, presented by OHANDJA ERNEST (student University of Douala)
- Benthic macroinvertebrates and the state of health of the Elabé river (South Cameroon), presented by Harissou Harissou.
- The phytoplanktonic diversity of the Atlantic coast in Kribi: dinoflagellates of the genera Ceratium and Protoperidinium, presented by OWONA François Désiré (student University of Yaounde 1)



Presentation by **Ntangyong Indrig Laeticia**, student oceanographer



Dr Mama Crepin (Institut des Sciences Halieutiques/ APCAM)

- Marine and coastal pollution: In this section, emphasis was laid on pollution by plastic bottles and used fishing nets. A presentation was made on the impact of plastic waste and marine pollution in Cameroon: the case of Kribi and the Atlantic Ocean, by Pierre Divin NDTOUNGOU (Coordinator of the Stop Pollution Association)



- Nature-based solutions: techniques for fighting coastal erosion and restoring mangroves were presented by Dr Onguene Raphaël. He developed the "ROOT" model which is in its design phase and whose aim will be to reconstitute mangrove roots and fight against erosion on the Cameroonian coastline.
- Enhancement strategies were presented by Yannick Amba (Landscape designer, Balaz Studio) on the landscaping of Kribi and OMBOLO Cédric (student) presented on tourism practices on the Cameroonian coast.

Biodiversity and conservation.

The presentations and discussions were focused on marine biodiversity and conservation with sub-themes as follows:

Biodiversity: The animal species on which the speakers focused on were manatees, marine turtles and elasmobranchs.

The first presentation under this heading was made by Wongibe Dieudonné (Student, University of Bamenda) who illustrated research methods on the conflicts between fishermen and manatee in Lake Ossa, as well as mitigation strategies.



Dr Tedonzong (TRAFFIC), Baba (MINEPIA/ISH), Ebode (MINEPIA), Mbotiji (AMMCO) in the IUU fishing panel.

A presentation was made by Mr. Nnanga Eddy (Coordinator of AMMCO) on the Conservation Department of the Lake Ossa Wildlife Reserve who focused on the methods of evaluating the effectiveness of manatee conservation actions and its habitat in Lake Ossa and anti-poaching monitoring and enforcement actions.

For the marine turtle group, Ms Djoumessi Marlene (Community Development Officer, Tube Awu), Mr Wamba Joel (Ecological Monitoring Officer, Tube Awu) and Ms Niouma Sissoko (RASTOMA) elaborated on community actions, the results of the last five years and the federative approach that has been adopted. Wamba Joel (Head of ecological monitoring, Tube Awu) and Ms Niouma Sissoko (RASTOMA) spoke about community actions, the results of the last five years and the approach of federating stakeholders which has made it possible to improve the conservation status of the four species of marine turtles present in Cameroon's coasts, namely; the olive ridley turtle, the leatherback turtle, the green turtle and the hawksbill turtle.

Finally, on the issue of elasmobranchs, AMMCO has produced an atlas describing the 39 species of rays and sharks that have so far been documented in Cameroon. This atlas was presented by Fogwan Cedrick (Head of marine programme, AMMCO), while Mengoue Guy (Assistant, AMMCO) focused on the diversity and threats on the West Coast (South West region of Cameroon). It emerged that of these 39 species, 11 are critically endangered while Cameroonian law has not yet listed them as protected species. Biankeu Cédric (Assistant, AMMCO) focused on the diet of two species *Carcharhinus leuca* and *Fontitrygon margarita*. It was found that these species have a preference for crustaceans in their juvenile state.



IUU fishing and biodiversity crimes.

Five speakers presented the problem of illegal fishing and the way forward. In his presentation on discards in Cameroonian industrial fishing, Mr. BABA Inoussa (ISH/MINEPIA) reported discard rates of about 75% of catch weight. Dr Tedonzong Luc Roscelin (TRAFFIC), explained that illegal fishing as well as other crimes on biodiversity and by extension other types of crime are linked. The common points of convergence are the facilitators i.e. brokers, money launderers, accountants, client managers, document forgers, bankers, shipping logistics, customs clearance agents and freight forwarders. Working together will help stop these scourges. To this end, a collaborative project with AMMCO has already been initiated to stop IUU fishing.

On the issue of IUU fishing, Cameroon, through MINEPIA, has a plan to get Cameroon out of the yellow card warning given by the European Union Commission. In her presentation, Mrs. Ebode Jessica, MINEPIA's representative presented the offenses observed during surveillance and patrols at sea since 2014, such as the malfunctioning of the Vessel Monitoring System (VMS) and committed herself to the revision of the fishery legislation. In this process, MINEPIA is supported by AMMCO, EJF and FAO. To crown it all, Noella Mbotiji (Project Assistant, AMMCO) presented the project titled "Supporting the Cameroon's government efforts to improve fishery management plan and stopping Illegal, Unreported and Unregulated fishing", funded by OCEANS 5.



Présentation de **Julien DAUDU** (EJF) via zoom.

This project aims to revise Cameroon's fisheries legislation by making it align with international standards, strengthen the Monitoring, Control and Surveillance (MCS) system of fishing activities and to establish a fishery management plan. In this project, AMMCO is working in collaboration with MINEPIA and EJF. In the same vein, Julien DAUDU, the representative of EJF made a presentation on the notion of IUU fishing and its consequences. He also detailed the actions to be taken to avoid IUU fishing with the overall recommendation of "Transparency and stakeholder engagement".

During the discussion session, it emerged that with regard to fishing in Cameroon, the Ministry of Transport (MINT) is the body in charge of vessel registration in Cameroon, while MINEPIA grants the fishing licence after the said vessel has received registration from MINT.



Unfortunately, several fishing vessels with a history of IUU fishing in other countries have been registered in Cameroon in recent years without being subject to a scrupulous analysis of their history by MINEPIA. It was therefore recommended that in order to put an end to the Flags of Convenience that have led to the "Yellow Card", collaboration between MINT and MINEPIA in the granting of registrations to fishing vessels should be reinforced.

Participatory approaches to conservation.

The presentation made by Balam Cyril, the IT manager responsible for the development of the SIREN application, enabled participants to understand the existence and functioning of the Siren application, which is used by fishermen to document marine animals. The discussion session focused on the functioning and confidentiality of the data and pointed out that projects can be public or private, the raw data always belongs to the author and above all the need to set up a multilateral process of data transfer between governmental, industrial and civil society actors.

The presentation by Wamba Joel and Djoumessi Marlene from the community association Tube Awu reported on the participatory approach to marine turtle conservation that has been put in place by the people of Ebodje (South Cameroon). The contributions of the locals have made it possible over the last 5 years to carry out more than 10,000 surveillance and search patrols and to secure more than 2,000 nests, 200,000 eggs and release 500 turtles caught accidentally.



The little fish and the pollution, Lyrical tale of relaxation.

Protected marine areas.

This theme was mainly driven by experience sharing. The actors of land conservation shared their success stories. The Limbe Wildlife Center (LWC) , in its presentation showed that with awareness and the existence of laws to protect primates, the LWC has been able to restore legendary animals, some of which have been named PICO and BAKOSSI. On the other hand, the Programme for the Sustainable Management of Natural Resources (PSMNR), which works in five forest protected areas in the South West Region has converted former poachers into technicians in various fields including electricity, masonry, car mechanics.



Anthony AGBOR, PSMNR-SW



In the same vein, Mr. Régis Kema Kema, a Gabonese partner, presented the successes of marine biodiversity conservation in Gabon. In his presentation, he described the problems faced by **The National Parks Agency of Gabon** at the beginning of the conservation projects. This was the problem of the delimitation of marine protected areas in Gabon. To this end, signposts have been used for areas close to the coast and floats for the open sea. In addition, a mobile application in test version was developed by a community approach for the materialization of the limits. In the light of these experiences, Cameroon was asked to take advantage of and improve the management of its marine species.



Régis KEMA KEMA, ANPN, Gabon

To this effect, Dr Gordon Ajonina, CWCS Coordinator, presented on the state of conservation of marine and coastal areas in Cameroon. He specified that the management of protected areas in Cameroon, including MPAs, is the responsibility of MINFOF and is governed by the 1994 law. Currently, protected areas represent about 23.9% of the Exclusive Economic Zone (EEZ) while the objective is to protect 30% of the EEZ in 2030. The main challenges faced by the marine and coastal zone are habitat degradation, pollution, poaching, illegal fishing, invasive plants, ignorance of the population and lack of appropriate legislation. To counteract these challenges it is important to involve the communities in the process, set up a management plan for MPAs, and revise the law to meet global standards. The experiences, management successes and the state of play being known, Mr. ENDEZOU MOU Bertrand Georges, Head of the Department of Wildlife Management and Inventories at MINFOF presented the situation of MPAs in Cameroon in the face of global challenges: assets, constraints and prospects.

He stated that in view of the developments in the country and the requirements contained in the strategies developed such as the NDS30, and the appearance of MPAs, it is appropriate to propose a new social contract to the population and to promote new approaches for the management of protected areas that will improve the Cameroonian economy. In this light, it is important to mobilise expertise in order to reconcile biodiversity conservation with local development and contribution to the national economy.



TABLE OF THE STATE OF THE MARINE AND COASTAL ENVIRONMENT IN CAMEROON

State of the art of biodiversity research :

| Group / Species | Topic | Location |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Elasmobranchs | Seasonal dynamics and diet of <i>Carcharhinus leuca</i> (muller et henle, 1839) and <i>Fontitrygon margarita</i> (Gunther, 1870) (Chondrichtheys, Elasmobranchii) from the maritime façade of the wouri estuary. | Douala-Edea National Park |
| Elasmobranchs | Diversity of elasmobranchs landed on the West Cameroon coast: Proposal for a sustainable management tool | South West |
| Elasmobranchs | Atlas of the elasmobranchs of Cameroon | The whole Cameroonian coast |
| Marine turtles | Community approach to marine turtle conservation on the Atlantic coast of Cameroon: the case of the Tubé Awù community research and development association of Ebodjé. | Edodje-Campo |
| Multi-species | Discards from Cameroonian industrial fishing | Douala |
| Manatee | Determinants of bycatch and fishing effort of the African manatee (<i>Trichechus senegalensis</i> , link 1795) in the Lake Ossa Wildlife Reserve: Prospects for fishermen Mitigation of manatee conflicts | Lake Ossa Wildlife Reserve |
| Zooplankton | Structure and zooplanktonic biodiversity of the mangrove waters of the Cameroonian coast at Mouanko | Douala-Edea National Park |
| Phytoplankton: Desmidiatales | Physicochemical quality of mangrove waters in the Cameroon estuary and impact on the diversity and dynamics of Desmidiatales (Zygnematophyceae) | Wouri Estuary |
| Phytoplankton: dinoflagellates | Phytoplanktonic diversity of the Atlantic coast at Kribi: dinoflagellates of the genera <i>Ceratium</i> (schrunk 1793) AND <i>Protoperidinium</i> (Bergh 1881) | Kribi |
| Benthic macroinvertebrates | Assessment by benthic macroinvertebrates of the state of health of an Elabé river (South Cameroon) | Kribi |

**State of the art of habitat research :**

| Habitats | Topic | Location |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Mangrove / Estuary | Ecological structure and physico-chemical analysis of mangrove sediments in the Nyong estuary | Nyong Estuary |
| Estuary | Evaluation of the applicability of floating cage fish farming in the Nyong estuary | Nyong Estuary |
| Estuary | Geomorphological characterisation of the Nyong estuary | Nyong Estuary |
| Coastal | Heritage issues of the Cameroonian coast towards a need for safeguarding: the case of Manoka Island, Wouri River estuary, Cameroon | Wouri Estuary |
| Urban-Coastal | Calibration of a hydrometric station downstream of a river influenced by the tide in Douala Cameroon | Douala |
| Coastal | Landscaping and risk prevention/management of the coastal environment: Case of the autonomous port of Kribi, Phase 1 | Kribi |

State of play by organisation :

| Organization | Work done | Location | Period |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------|
| AMMCO | SIREN application and participatory approach to research and conservation of marine megafauna and their habitat in Cameroon. | The whole Cameroonian coast | 2012-2022 |
| AMMCO | STOP illegal, unreported and unregulated fishing in Cameroon. | The whole Cameroonian coast | 2022 |
| Conservation Department of the Lac Ossa Wildlife Reserve | African manatee monitoring and conservation efforts in the Lac Ossa Wildlife Reserve in Cameroon. | Dizangue | 2017-2021 |
| RASTOMA | Federating civil society organisations in Central Africa around a common vision: maintaining marine turtle populations in their habitats. | The whole Cameroonian coast | 2012-2022 |
| Tube Awu | Community-based management of marine turtles and their habitat in the Manyage Na Elombo-Campo National Marine Park. | Manyage Na Elombo-Campo Marine National Park | 2015-2022 |
| CWCS | Conservation of mangroves and associated ecosystems on the Cameroonian coast | The whole Cameroonian coast | |
| APCAM | Education and sustainable management of the Nyong estuarine sub-basin. | Nyong Estuary | 2019-2022 |
| ASPOL | Youth association for the fight against marine and coastal pollution. | Kribi | 2021-2022 |



The main challenges in marine and coastal management

The presentations and debates during the symposium helped to identify challenges in the management of the Cameroonian marine and coastal environment, amongst which are :

- Lack of local expertise in Cameroon
- Lack of data on habitat, hydrological phenomena and biodiversity
- No traceability of industrial fishing data
- Unclear data transfer mechanisms between CSOs, companies and the government
- Low level of collaboration between the different administrations/sectors
- Poor community understanding of conservation issues
- Complexity of administrative procedures on the revision of protected area management plans
- Non-existence of an ecological monitoring protocol in an MPA, (patrols, surveillance...)

Main recommendations:

Based on the aforementioned gaps the following recommendations were made:

- Train coastal marine specialists and build the capacity of operational actors in specialised fields (hydrology, management of marine protected areas, stock assessments, etc.)
- Intensify research on fish stocks, biodiversity and habitat
- Establish and popularise a data transfer mechanism (two-way) between CSOs, companies (industrial fishing companies and others) and the government
- Establish a system of annual evaluation of the effectiveness of protected areas that already have a management plan
- Determine the responsibilities of the sectors on the issue of rays and sharks
- Include at least 11 critically endangered species among the protected species in Cameroon
- Strengthen CSO-Industry-MINT-MINEPIA-MINEPAT collaboration in the fight against IUU fishing
- Strengthen CSO-Community-MINEPIA-MINFOF-MINEPDED- MINEPAT collaboration on the issues of elasmobranchs, trafficking and protected areas
- Revise the 1994 wildlife law and include clear provisions for MPA management and fisheries management
- Mark the boundaries of MPAs to avoid/prevent incursions
- Define a protocol for ecological monitoring of MPAs



B - CAPACITY BUILDING

The capacity building session was focused on; nature-based solutions and the conservation of rays and sharks:

Nature-based Solutions.

The workshop was conducted by Dr. Onguene Raphaël (University of Douala) who was assisted by Mr. MPILA Alain Patrick (Director of Development and Environment of the Port of Kribi). The concepts of Nature-based Solutions were presented. A contextualisation with the problems linked to coastal erosion. Re-vegetation of the back beach is the most practical solution in this context. With the advantage that Cameroon has with the presence of mangroves, the restoration of these ecosystems is the recommended. The port has initiated a 10-year plan programme to improve socio-economic and environmental actions, and planning for the Nyong and Campo area. This plan aims to protect the coastline based on Nature based solution. Furthermore, on the subject of ballast water management, the port of Kribi is focusing on the prevention through research and the implementation of strict monitoring protocols.

Conservation of rays and sharks.

The workshop was led by Betty Laglbauer, Simon Hilbourne and Stephen Bargaker of the Manta-Trust. This training was divided into two parts, one theoretical and the other practical. In the theoretical part, the trainers developed the photo identification of ray and shark species by laying emphasis on the way of taking photos during the monitoring of landing sites, in particular the dorsal and lateral view, a zoom on the head, the back, the eyes, the fins, the methods of evaluation of the fishing effort, the use of satellite methods to study the distribution of the species. The area on genetics, including DNA analysis methods to confirm species differentiation was also covered.



Session pratique d'identification externe et interne des raies conduite par Betty Laglbauer.

The practical component consisted of the dissection of three individual skate and shark during which participants were instructed to identify the internal organs and their role. The use of species knowledge, growth stages and sex were developed to inform appropriate conservation techniques in different contexts.



Presentation by **Betty Laglbauer** on sharks and rays.

In addition to the symposium and capacity building, the 2022 Street Whale edition has helped to inform the Cameroonian public about the dangers that threaten the marine environment and the need to protect marine resources. This awareness raising was done through artistic and sporting activities.



2.2. CONDUCT OF ARTISTIC ACTIVITIES.

A. ARTISTIC ACTIVITIES.

In parallel to the scientific activities, the workshop was filled with artistic activities through an exhibition of works of art related to the Cameroonian culture as well as the marine and coastal environment, dance sessions, wall paintings at the Mboamanga landing stage and musical concerts. Under the leadership of the painter Martine Berzouga, the consortium of about twenty internationally renowned Cameroonian and local artists performed music, dance, storytelling and painting. Musicians such as Lydol, Adango and storytellers such as the group BE LOHOVO, cabinet makers such as Olomo Robert, visual artists, Megangmo Éliane and DJ. Luciano sent out messages in their art which were centered on the need to conserve marine animals.



Martine Mbarzouga, artistic director of the Street Whale 2022.



The artist LYDOL at the gala evening.



Mural painting by Martine Mbarzouga



Dr Aristide TAKOUKAM KAMLA in front of the street Whale's Whale.



Whale and sea turtle made from local bamboo fibre.

Moreso, the mural at the entrance of the landing stage shows the diversity of the marine wildlife species which are the pride of Cameroon though threatened. However, the painting inside the Boamanga landing stage made by the artist Martine Mbarzouga, shows the love that a young child has for the leatherback turtle to the point of feeding it with fish. This painting invites the population to take care of turtles and other marine animals, including their natural habitat.

The artistic activities ended with the construction of a 3.5 m long whale by the cabinetmaker Olomo Alounga Pierre Robert and the plastic artist Ms Megangmo Éliane. This whale was made using a wooden skeleton covered with various types of waste collected at Ngoye beach. The monument was installed at Ngoye beach to raise questions from the inhabitants and visitors of the city of Kribi. More than 1000 visitors observed the whale during the first 3 days following its inauguration.



Whale made by **Olomo Alounga Pierre Robert** and **Megangmo Éliane**.



Artists and scientists at the gala evening.



B. SPORTS ACTIVITIES

The sports activities were crowned by a major clean-up campaign of the Ngoye tourist beach. To this end, fishermen, scientific participants, the population of Kribi and young people from the **"Stop Pollution"** association mobilised and were able to collect about 900 kg of waste including plastic bottles, discarded nets and many other types of waste found on the beach. This waste was handed over to the local municipal waste



Kribi beach cleaning.



Partie de beach volley-ball sur la plage de Ngoyé.

collection company after a sorting process.

A sea trip was organized which allowed some participants to experience the realities of the marine environment while enjoying its tourist attractions. The participants did not encounter whales and dolphins, but they were able to appreciate the beauty of the ocean, the view of the coastline from the open sea, and the oil installations, as well as the effect of the warm and salty water.



Excursion to the sea with the participants of the street whale 2022..



C. NETWORKING

The Street Whale was a triple networking opportunity for Cameroon's coastal marine actors and foreign experts. During the scientific and artistic sessions, actors had the opportunity to discuss with staff on how to network, develop friendship links and mentoring ideas. More so, the Training-Employment Forum allowed students undertaking their Masters degree in Coastal and Marine Ecosystem Management of the University of Douala to discuss with organisations and experts on the possibilities of technical supervision and internships. Discussions between participants enabled them to explore avenues of collaboration.



Family photo of the participants in the science workshops.

Finally, the stakeholders present met in a closed session on the last day of the Street Whale event to take stock of the ideas discussed during the workshop. Worth noting that management actions had been undertaken by several stakeholders who had so far been working in an isolated manner. This has resulted in duplication of effort on ground, economic and scientific losses, leading to a reduction in impacts on the ground. These actors therefore deemed it necessary to set up a framework for con-



The representative of the Mayor of Kribi and Camille Hosteint.

certation of actors in order to capitalise on the strengths of individuals and organisations acting for the conservation and enhancement of the Cameroonian marine and coastal environment. The 2-hour working session brought together 25 participants from 14 organisations. During this session, Dr Gordon Ajonina, CWCS Coordinator led the presentation on the benefits of working in synergy, the methods of operation of networks and suggestions for the case of the Cameroonian marine and coastal environment.

At the end of this session, the actors unanimously decided to set up a platform for working in synergy called Cameroon Marine and Coastal Network (CAMNET). The structuring of CAMNET is therefore the way forward.

CONCLUSION

RECOMMENDATIONS FROM THE STREET WHALE 2022

The second edition of the **Street Whale**, "*Marine Wildlife Celebration Workshop*" was held in Kribi from **8 to 11 June 2022** with the participation of more than **1,000 people** at different levels through scientific, artistic and sporting activities. The artistic activities were crowned by the construction of a whale made from waste collected at the beach.

The symposium promoted the exchange of experiences on issues related to coastal management on topics related to erosion, spatial coastal planning and nature-based solutions, and the conservation of marine and coastal resources with topics on biodiversity, the fight against IUU fishing, governance of protected areas and participatory and community-based approaches in the protection of wildlife and marine habitat.

Overall, all the planned activities were carried out. At the end of these activities, a brainstorming session was held to consolidate all the recommendations, during which the Cameroon Marine and Coastal Network (CAMNET), a synergy platform for marine and coastal stakeholders, was created. This platform will be responsible for monitoring the implementation of the recommendations made during the Street Whale and for advocating for the improvement of the protection and management of marine and coastal ecosystems in Cameroon. The 2022 Street Whale edition led to the following recommendations:

1. Train coastal marine specialists and build the capacity of operational actors in specialised fields (hydrology, management of marine protected areas, stock assessments, etc.).
2. Intensify research on fish stocks, biodiversity and habitat.
3. Establish and popularise a data transfer mechanism (two-way) between CSOs, companies. (industrial fishing companies and others) and the government.
4. Establish a system of annual monitoring and evaluation of the effectiveness of protected areas that already have a management plan.
5. Determine the responsibilities of the sectors on the issue of rays and sharks.
6. Include at least 11 critically endangered species among the protected species in Cameroon.
7. Strengthen collaboration between CSO-Industry-MINT-MINEPIA-MINEPAT in the fight against IUU fishing.
8. Strengthen collaboration between CSO-Community-MINEPIA-MINFOF-MINEPDED-MINEPAT on the issues of elasmobranchs, trafficking and protected areas.



9. Revise the 1994 Wildlife legislation and include clear provisions for the management of MPAs and fisheries management.
10. Demarcate the boundaries of MPAs to avoid/prevent incursions.
11. Define a protocol for ecological monitoring of MPAs.



Participants' delight in storytelling following a networking session.



Artistic and scientific workshop to celebrate
marine wildlife in Cameroon

KRIBI 08 - 11 JUNE 2022



Street Whale ^{2nd edition} 2022

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